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developments based largely upon publicly available "reference plant" data. NRG has undertaken detailed work to arrive at an achievable proposal. This approach, coupled with NRG's financial strength, considerable in-house project development and engineering skills and expertise operating in Delaware and PJM, serves to minimize the execution risk to Delmarva, compared to other alternatives.

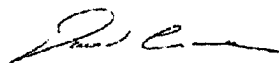
We are excited by the prospect of working with Delmarva and key State agencies (including the Public Service Commission, the Director of the Office of Management and Budget, the Controller General and the Energy Office (an office of the Department of Natural Resources and Environmental Control)) to provide a new power unit at Indian River that comprehensively and optimally meets the specific requirements of the Electric Utility Retail Customer Supply Act (the "Act"), in terms of providing significant value to the State through:

1. Providing a resource that will utilize *innovative baseload technology* and squarely meets the specific example of "coal gasification" provided in the Act.
2. A resource that will provide *long-term environmental benefits to the citizens of Delaware*, through the construction and operation of an advanced technology plant with a superior environmental footprint, coupled with retirement of existing Units 1 and 2 at our Indian River plant upon commercial operation of the new facility.
3. Reducing the impact of new development and increasing technical and economic efficiencies through utilizing *existing fuel and transmission infrastructure*, as well as *existing brownfield or industrial sites*.
4. The use of abundant and stably priced domestic coal, *promoting fuel diversity and encouraging price stability*.
5. A premier facility that is electrically located so as to *improve and support system reliability* in Delaware.

As you know, a new power plant represents an enormous capital commitment for an asset that will have a life of 30 or more years. We strongly believe that the Act and Delmarva's RFP provides a critical opportunity to incent the commercial implementation of an advanced technology like IGCC that is not only "ready for prime time", but has the ability to meaningfully address carbon and other environmental issues during the life of its operations. In fact, our work to date confirms that there are existing ideal local geological formations available for carbon sequestration in close proximity to the plant site, and these are described in greater detail in our submission. We believe that NRG is best placed to bring realization of Delaware's farsighted plans for innovative baseload technology, together with its economic and environmental policy objectives, to fruition through implementation of our Indian River IGCC Project.

In response to the RFP requirements identified by Delmarva, our proposal is necessarily detailed – including where it deals with IGCC technology issues. As such, we encourage you and your team to arrange a meeting – at your convenience – at which we can discuss, and clarify as needed, any aspects of our bid. In any event, we remain available to answer any questions on our proposal and provide any additional information that may be helpful. Please do not hesitate to contact Morten Sissener, the lead developer on our Indian River IGCC Project on (609) 524-4898 or [morten.sissener@nrgenergy.com](mailto:morten.sissener@nrgenergy.com) or me directly on [REDACTED]

Very truly yours,



David Crane

Encs.

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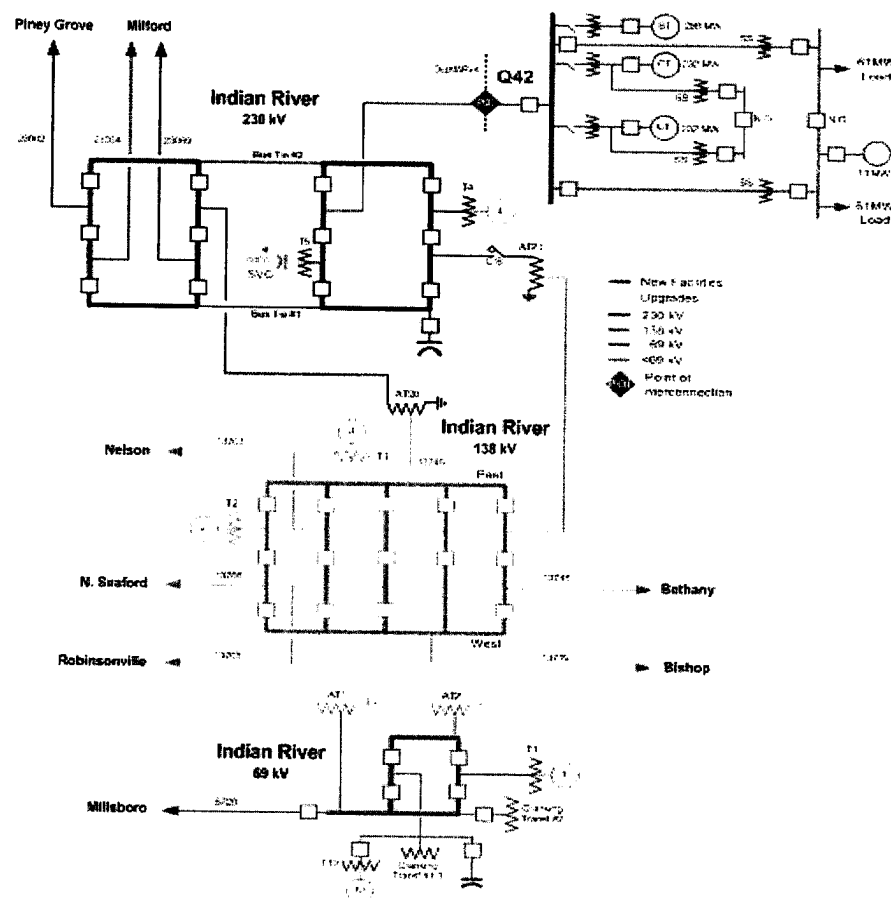
#### 1.4 Existing Fuel & Transmission Infrastructure

## Fuel Infrastructure

By using the same roadways and railways as the existing Indian River units, the Indian River IGCC Project will have minimal impact on the State's transportation infrastructure. All solid fuels, as well as the startup oil, will be delivered by the existing Delaware rail infrastructure. Any biomass delivered to the Project will most likely be delivered through a combination of truck and rail. The Norfolk Southern rail company will be the primary fuel transporter. Norfolk Southern's system can readily accommodate the net incremental fuel deliveries to the Indian River site. However, due to the increased business represented by the Project, Norfolk Southern will likely make upgrades to its regional rail system to improve throughput and reliability. NRG plans to build a new circular rail loop, unloading station and fuel yard within the site boundaries to serve the Indian River IGCC Project.

NRG intends to bring natural gas to the Indian River site to replace oil as a start-up and back fuel. NRG is working with [REDACTED] to expand its service into the Millsboro area. The Indian River IGCC Project is not dependent on this future natural gas supply and can proceed without it.

**Figure 1-6 Project Interconnection & Transmission**



of baseload plants will remove the underpinnings of low cost energy production, and amplify the effects of natural gas on energy prices.

Compared to the significant fluctuations in the historic PJM market prices over the past several years, NRG's bid price for the Indian River IGCC Project modestly increases in step with predictable macro factors such as inflation, and represents a timely and efficient offset to upward price pressures.

### **Summary Commercial Offering**

#### **Quantity & Delivery Point**

NRG proposes to enter into a long-term unit contingent PPA with Delmarva to deliver 400 MW of innovative baseload, carbon capture ready capacity and energy from its 600 MW Indian River IGCC Project. Delmarva's pro rata share of energy purchase in any given payment period will be 400/600 (or 66.67%) of the total actual energy production from the new plant. Energy will be delivered to Delmarva at its existing 230kV Indian River substation.

As part of NRG's detailed project development process to date, we remain engaged in discussions with a number of potential offtakers for the remaining capacity and energy of the Indian River IGCC Project. [REDACTED]

[REDACTED] In Section 1.9, we have included a support letter from [REDACTED] which has indicated its interest in participating with NRG in the Indian River IGCC Project up to [REDACTED]

#### **Contract Term**

NRG is flexible with respect to the term of the PPA and notes that while 20 years is the shortest practical term for the Indian River IGCC Project, a 25 year term provides the best possible pricing. Therefore, NRG is proposing a 25 year term in this RFP response.

#### **Turndown & Tiered Energy Pricing**

Responsive to Delmarva's concerns about limited Standard Offer Service ("SOS") load requirements at certain times, NRG has specifically structured its offer to incorporate an effective turndown ability for Delmarva, with tiered pricing. In particular, Delmarva may schedule virtual turndown of its energy purchase from the Indian River IGCC Project to as low as 70% (280 MW) of the 400 MW contract capacity. Since the Project's excess capacity (200 MW) will be sold to another party(s), physical turndown may or may not occur concurrent with virtual turndown – but Delmarva will be indifferent to this, given the achievement of its stated commercial objectives through the virtual turndown mechanism.

Delmarva will not be invoiced for energy produced in excess of its scheduled turndown. To accommodate virtual turndown, overall energy pricing will be two-tiered. Tier 1 pricing will be charged for the first 70% of pro rata energy production (up to 280 MW). Tier 2 pricing will be charged for pro rata scheduled energy purchase greater than 280 MW up to the full 400 MW contract limit.

#### **Carbon Capture Option**

NRG is offering Delmarva the option to have the carbon capture equipment installed as part of the initial Project build, ready for commercial operation in 2013, or to install such equipment at some future date – selected by Delmarva. Installation of carbon capture equipment on an IGCC facility can be done effectively and without compromising the integrity of the plant post-initial construction.

Senators Joe Biden and Tom Carper, and US Representative Michael Castle in support of the Project in the context of the certain federal tax credit applications (see

- Figure 1-10).
- **James Wolfe, President & CEO of the Delaware State Chamber of Commerce**, representing nearly 2,800 member companies employing almost 155,000 people in Delaware (see Figure 1-11).
- [REDACTED] expressing support of the Project and ongoing interest in securing up to 200 MW of long-term supply from the Project. [REDACTED] territory covers approximately 80% of the Delmarva Peninsula (see Figure 1-12).
- **State Representatives John Atkins, Joseph Booth and Gerald Hocker** in support of the Project's numerous benefits to Delaware endorsing approval of NRG's Project by the State agencies (see **Error! Reference source not found.**).
- **President of the Delaware State AFL-CIO, Samuel Lathan** representing over 28,000 men and women members in support of NRG's Project in Millsboro, DE (see Figure 1-14).
- **Business Manager of the IBEW, Douglas Drummond** in support of NRG's \$ 1 billion + clean coal Project (see Figure 1-15).
- **Sussex County Engineer, Michael Izzo**, expressing strong interest in working with NRG to solve the region's recycled water disposal challenges. The NRG IGCC Project intends to utilize 100% recycled water for its process needs (see Figure 1-16).

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Figure 1-12 [REDACTED] Support Letter

December 14, 2006

Mr. Morten Sissener  
Director of Development  
NRG Energy, Inc.  
211 Carnegie Center  
Princeton, NJ 08540

Dear Morton,

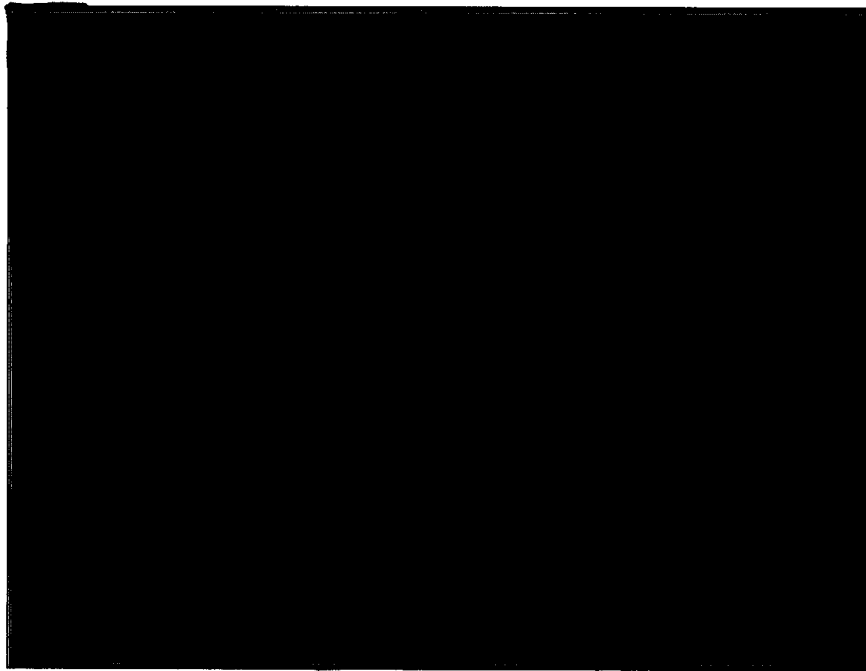
[REDACTED]

Over the past several months, we have studied NRG's development plans for this project and appreciate the level of detailed information that you have provided to us. Having reviewed the engineering and cost information that you have provided, [REDACTED] has an interest in potentially participating in the Indian River IGCC project. This may take the form of an equity ownership share of the project, a long-term purchase agreement or some combination of the two. Our current studies indicate that participation in an amount ranging from 75 MW to 200 MW of the project could fit our needs well.

[REDACTED]

I understand that you plan on participating in Delmarva Power & Light's long-term request for power supply proposals by submitting a bid for up to 400 MW of generation from the Indian River IGCC plant. [REDACTED] commends your participation in this process and hopes that your proposal will be successful. At this point, it would seem that our interest in the project can be satisfied out of the remaining 200 MW of generation and that your successful participation in the Delmarva RFP would greatly enhance the project's prospects.

[REDACTED]



### 1.11 Financing and Ownership Structure

Construction of the Indian River IGCC Project will be funded by a blend of cash equity and project financed debt. NRG currently has liquidity of approximately \$2.5 billion and over the next six years expects to generate approximately \$7.5 billion in additional free cash flow from operations. Although NRG has sufficient capital resources to fund all the equity itself, it intends to seek strategic partners to enhance the overall financial strength of the project, while retaining a key stake. NRG is already in discussions with interested parties with respect to additional offtake and/or sale of an undivided interest in the excess project capacity not already contracted with Delmarva.

NRG has reviewed the Indian River IGCC Project with key lending institutions such as the [REDACTED] and others. Preliminary indications of financeability and support from these firms are included in this application in Section 9. In short, the lending community is highly supportive of the Project based on NRG's sponsorship and the existence of a long-term PPA, subject to the usual and customary terms for project financing. Based on extensive analysis and third party inputs, as part of our comprehensive development process to date, NRG is highly confident in the economic viability and financeability of the Indian River IGCC Project. [REDACTED]

NRG is currently assuming a seven-year construction loan that would be refinanced after the commercial operation date with long-term project debt. Discussions with potential lead arrangers confirm the availability of post-construction term loans with tenors equal to or greater than the proposed 25 year term of the PPA.

### 1.12 Project Status

NRG selected its existing Indian River plant as the ideal candidate site for an IGCC project in early 2005. Since then, NRG has expended significant funds and internal man-hours in developing the Indian River IGCC Project. NRG also retained highly experienced technology, engineering, environmental and geological consulting firms, such as Process Energy Solutions, Worley Parsons, Black & Veatch, Ecology & Environment and Advanced Resources International to support this effort. Over the past 18 months, NRG has completed a comprehensive preliminary technical, environmental, geological, financial, regulatory, commercial, and community assessment as part of its deliberate and staged development of the Indian River IGCC Project.

Key results from these preliminary development activities include the selection of Shell technology for the IGCC design basis, the identification of several vendors as potential EPC contractors, preliminary engineering reports containing detailed estimates for capital cost, power output, heat rate, carbon capture and sequestration and emissions, as well as an environmental overview consisting of a permit roadmap and preliminary agency discussions. A detailed risk assessment was also prepared that includes a compilation of key lessons learned from prior IGCC projects worldwide that will be incorporated into NRG's design and execution plans going forward.

NRG has engaged permitting consultants and has begun the permitting process. The permitting process is expected to take up to 18 months to complete. In addition, PJM has completed its initial Interconnection Feasibility Study with very favorable results. NRG has also filed the subsequent System Impact Study agreement with PJM which PJM is expected to complete in May, 2007.



[REDACTED] with construction beginning in 2008 and commercial operation established no later than June 1, 2013.

### 1.13 NRG Energy

#### ***Company Overview***

Organized in 1989, NRG is the leading competitive power generation company in its sector with a portfolio of over 24,500 MW. NRG's generating fleet is distinguished by its range in geography, fuel sources, and dispatch levels. NRG has projects in the Northeast, South Central, Texas and Western regions of the United States. It also has projects in Australia, Germany and Brazil. The company's projects use a wide array of fuels including wind, natural gas, oil, coal and nuclear fuels across a balanced portfolio of baseload, intermediate and peaking units. NRG also owns a wind development company which is actively pursuing wind generation projects in our core regions. NRG provides reliable wholesale electricity safely, affordably and consistent with its environmental commitment to the communities it serves.

Located in Princeton, New Jersey, NRG has a strong presence in the Northeast US. Its Northeastern fleet represents a total of just over 7,000 MW of generation, with 840 MW (~12%) of regional capacity located in Delaware. Of the current Northeast portfolio, 29% is fueled by coal, 50% by oil and 21% by natural gas. NRG seeks to have a greater percentage of coal-based power in its Northeast fuel mix to underpin fuel diversity – in turn fostering electric reliability and price stability – while providing cost-effective generation based on a fuel type with which NRG is intimately familiar and skilled.

NRG is a non-hierarchical, flat, fast-moving organization. All headquarters staff work in an open layout designed to foster collaboration and promote informed decision-making. By integrating plant operations, commercial risk, management of fuel supply and power sales, and the development of new facilities, NRG strives to operate in a safe, environmentally clean and low-cost manner. Through this integrated approach, NRG is positioned to reduce risk involved with fuel procurement, power production, and operating cash-flows while operating its fleet safely and efficiently. NRG's commodity risk management concentrates on the long-term to provide consistent and reliable cost and return profiles respectively to its customers and investors.

#### ***Managing Execution Risk***

Successfully developing, constructing and operating a billion dollar state-of-the-art clean-coal project requires a company and a project team with the highest standards of integrity, experience and excellence. Delmarva and Delaware deserve no less than the best the market has to offer and NRG believes that it is the right company, with the right offering, at the right time for Delaware.

NRG has developed and acquired thousands of megawatts of power projects over the last decade for which it has mobilized financing, and can do so again for the Indian River IGCC Project. NRG, as one of the leading generators in its sector, attracts significant attention and investment from Wall Street. Earlier this year, NRG acquired Texas Genco (now NRG Texas) for \$5.8 billion. This transaction added approximately 10,000 MW to NRG's portfolio in a move widely seen to bring together two extremely complementary businesses to produce greater overall value. NRG is also in late-stage development of an additional solid fuel unit at its Big Cajun II power plant: a billion dollar project that will add 700 MW of new generation in Louisiana.

NRG has an unrelenting focus on execution and prudent balance sheet management. Our strong financial and operational performance has allowed NRG to pursue responsible financial growth

## 2 Pricing & Commercial Terms

NRG's proposed pricing and key commercial terms for the Indian River IGCC Project are described in this Section. The pricing offered for 400 MW of energy and capacity from the proposed Project represents a true and fair reflection of the cost of innovative baseload generation in today's market. NRG believes this pricing offers Delaware a competitive and affordable long-term hedge against market volatility which, together with all the other benefits of the Project, represents compelling value. In addition, as market pricing changes in the near-term to reflect new and significant costs related to regulations on reduced mercury and carbon emissions, the proposed pricing for the Indian River IGCC Project will be even more attractive in providing dependable, baseload power from the next generation of power production technology for the benefit of all Delawareans.

In addition to offering long-term baseload power from the Project, NRG is also offering 280 MW of firm fix-priced baseload "bridge" energy from its existing Indian River facility starting in 2008 for the five year period prior to the Indian River IGCC Project entering commercial operation. This bridge is being offered to ensure that Delmarva has the necessary access – in the near term – to capacity and energy to continue to reliably support economic growth in the State, before the needed new generation comes on line.

This Indian River IGCC Project and all pricing proposals herein are fully contingent on NRG being awarded a long-term Power Purchase Agreement ("PPA") for the full 400 MWs of proposed energy and capacity.

### 2.1 Project Pricing

#### **Quantity & Delivery Point**

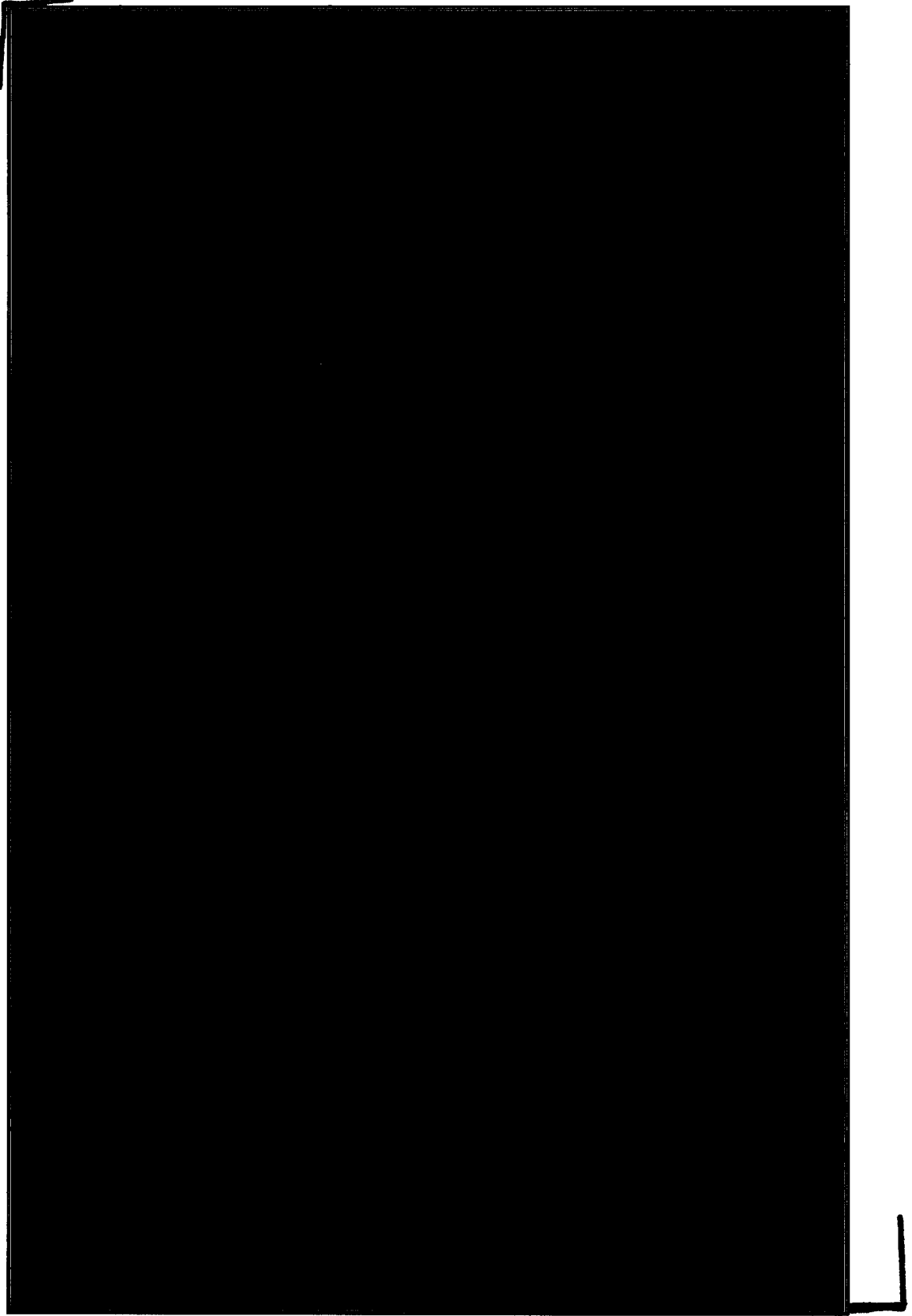
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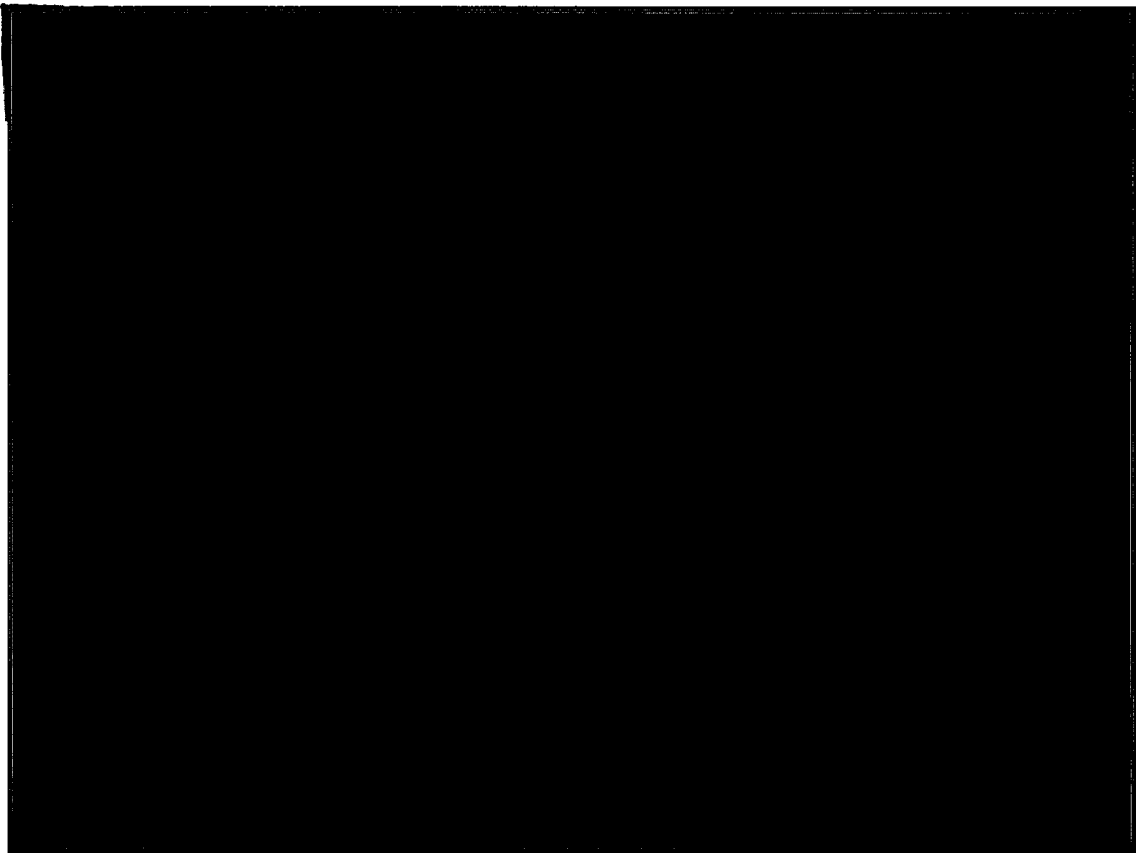
#### **Contract Term**

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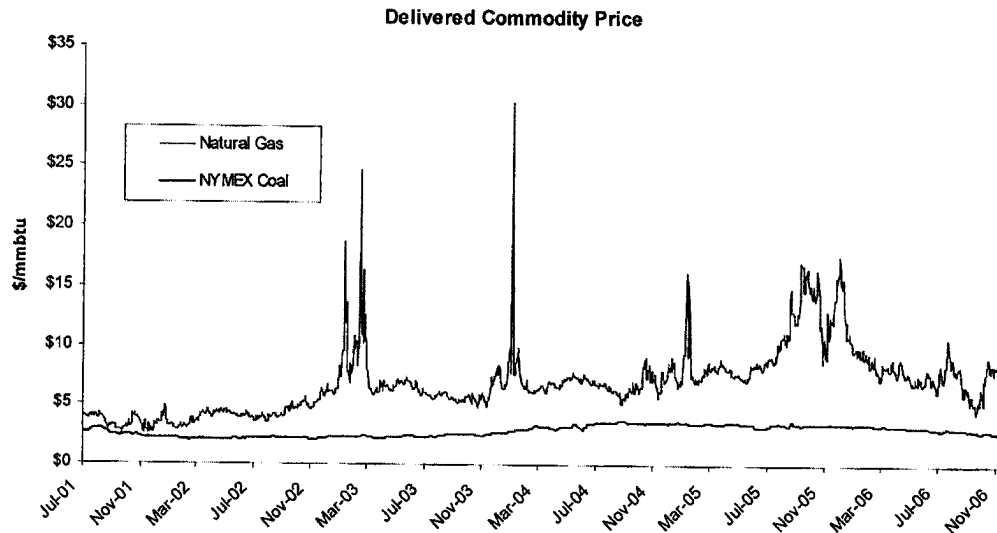
#### **Turndown & Tiered Energy Pricing**

Responsive to Delmarva's concerns about limited Standard Offer Service ("SOS") load requirements at certain times, NRG has specifically structured its offer to incorporate an effective turndown ability for Delmarva, with tiered pricing. In particular, Delmarva may schedule virtual turndown of its energy purchase from the Indian River IGCC Project to as low as 70% (280 MW) of the 400 MW contract capacity. Since the Project's excess capacity (200 MW) will be sold to another party(s), physical turndown may or may not occur concurrent with virtual turndown – but





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**Figure 4-1 Five Year Comparison of Delivered Natural Gas and Coal Prices<sup>1</sup>**

The large delivered cost difference between natural gas and coal shown in Figure 4-1 highlights the comparative advantage of an IGCC relative to a natural gas fired combined cycle plant. For the past two decades, natural gas combined cycle plants have been the overwhelming choice of power plant developers due to the ease in securing air emissions permits and low initial capital costs. Over this same period, natural gas prices and volatility have increased to the point where gas-fired combined cycle plants are currently not competitive with coal over the life of the plant. NRG has chosen IGCC because stability in the supply and price of the fuel, as well as reliability advantages, from using coal are now combined with the ability to meet the most stringent emission requirements, making IGCC the sensible technology choice for the next generation of power production.

## 4.2 NRG Fuels Group

NRG is one of the largest coal buyers in the U.S., supplying approximately 36 million tons annually to its domestic coal-fired power plants located across the country. NRG's [REDACTED] in-house fuel supply group manages fuel procurement and transportation for NRG's large domestic fleet. [REDACTED]

NRG has extensive experience in purchasing multiple grades of coal from all domestic producing regions, as well as importing coal from several foreign origins. NRG transports coal on five Class I railroads; manages a major barging operation on the Mississippi River; transports coal on the Great Lakes; ships coal along the East Coast in ocean barges; and manages ocean-delivered import shipments to the Northeast as well as the Lower Mississippi River. NRG's fuel shipments are supported by one of the largest private railcar utility fleets in the country [REDACTED]

The NRG Fuels Group is also responsible for supplying various grades of petroleum to its domestic power plants. For 2006, NRG's oil desk sourced and delivered over three million barrels

<sup>1</sup> Figure 4-1 illustrates the five-year historical delivered prices of NYMEX Eastern coal as compared to NYMEX Henry Hub + Transco Non-NYC basis. This shows the all-in delivered price of Eastern coal to an eastern PJM facility has maintained its cost between \$3 - \$4/MMBtu over the past five years. In contrast, the all-in delivered price of natural gas has been more extreme, ranging from \$3.50 to over 30.00 per MMBtu.

## 6.5 Carbon Sequestration Feasibility

While many stakeholders – in Government, industry and elsewhere - are keenly and increasingly focused on reducing greenhouse gases ("GHGs") in the atmosphere, the challenge of where to store those gases in a safe, permanent and economically and technically feasible way remains. The science of carbon sequestration is rapidly evolving – and the rate of that development is increasing. NRG has been active in this developing area for more than two years, as described at the beginning of this Section. While a number of issues remain regarding the optimal design and implementation of carbon sequestration facilities, NRG is positioned at the forefront of its industry to facilitate the identification and implementation of the necessary solutions and capitalize on those opportunities for the benefit of its customers and communities.

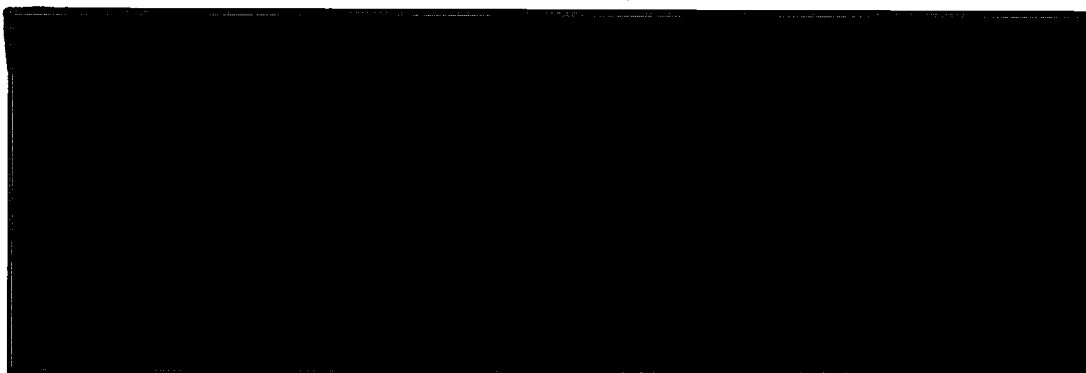
For the Indian River IGCC Project, there are several potential options for injecting and storing captured CO<sub>2</sub> in deep underground geologic formations very near the Indian River site, as well as a number of existing pipelines and pipeline right-of-way routes that could be utilized for constructing a CO<sub>2</sub> pipeline from the Indian River plant to other geologic storage sites. However, the proximate formations are the most promising for sequestration and offer the most technically and commercially feasible solution for the Indian River IGCC Project. A detailed report from Advanced Resources International ("ARI"), together with a white paper by B&V analyzing carbon capture, are included in the Appendix, by way of further background.

### ***NRG's Sequestration Effort with El Paso Corporation***

As a further sign of NRG's unwavering commitment to finding optimal solutions to CCS, NRG has entered into a Memorandum of Understanding (the "Sequestration Effort") with El Paso Corporation ("El Paso") with respect to carbon sequestration in the Northeast. NRG and El Paso are working together to identify, create, develop and implement CCS solutions that may ultimately be commercially applicable in their respective businesses, as well as possibly in other industries, bringing to bear their respective expertise along the GHG value chain.

El Paso, one of the premier energy companies in the US, owns North America's largest natural gas pipeline system (over 55,000 miles), transporting about one-third of daily natural gas consumption in the country. El Paso also owns one of North America's largest independent natural gas producers. The El Paso group possesses particular expertise in the handling, transmission and storage of gases and other liquids, clearly qualifying it to collaborate with NRG in working at the leading edge to identify and implement safe, commercially feasible and environmentally acceptable solutions to GHG emissions from industry – including power generation.

The initial phase of the Sequestration Effort is underway and includes:





### ***Options for Geologic Storage for the Indian River IGCC Project***

Several potential options exist for injecting and storing captured CO<sub>2</sub> in deep underground geologic formations surrounding the Indian River IGCC Project. NRG will conduct a detailed geologic and engineering study in the region surrounding Indian River to rigorously evaluate and test each of these options as the Indian River IGCC Project develops, in tandem with negotiation and finalization of the long-term, financeable PPA. Results of a pre-feasibility study conducted by NRG's consultant ARI are presented below, as well as in more detail in the Appendix 4.

### ***Regional and Local Geology***

NRG has worked with ARI, a leader in geologic sequestration evaluations, to conduct a geologic evaluation of the region near the Indian River site and the surrounding deep geologic formations. A principal objective of this study was to better identify opportunities to inject CO<sub>2</sub> into deep saline aquifers of the Cretaceous Potomac Group.

Generally, the main geologic options for storage of CO<sub>2</sub> include:

- **EOR:** The most attractive geologic sequestration approach is to inject CO<sub>2</sub> into depleted oil fields to achieve enhanced oil recovery ("EOR"). However, CO<sub>2</sub> injection near the Indian River station likely could not be used for EOR, simply because there are no known commercial oil and gas fields in the Delmarva area.
- **ECBMR:** Apart from EOR, it is theoretically possible to inject CO<sub>2</sub> into coalbed methane fields for enhanced coalbed methane recovery ("ECBMR"). However, this technology is far less mature than EOR, and in fact is still in the testing phase. To date, only one multi-well field demonstration for ECBM has been attempted (in San Juan basin, New Mexico). However, since there are no commercially significant deep coal deposits in the Delmarva area, ECBMR was ruled out as a sequestration option for the Indian River IGCC Project.
- **EGR:** Another storage method is CO<sub>2</sub> injection to maintain reservoir pressure and boost recovery from natural gas fields – enhanced gas recovery ("EGR"). At this time, EGR is an early-phase technology: the first commercial EGR pilot is only now just starting up at the Rio Vista gas field in California. Although some wells have tested non-commercial levels of natural gas both onshore and offshore the Mid-Atlantic region, there are no commercial gas fields in the Delmarva area and thus EGR was screened out as an applicable sequestration option in this case.
- **Saline Aquifers:** The simplest and lowest-risk geologic sequestration option at Indian River appears to be injecting CO<sub>2</sub> into deep saline aquifers, i.e., porous water-bearing formations which are not suitable for human use due to high dissolved mineral content (total dissolved solids - TDS – in excess of 10,000 ppm). Fortunately, large-volume and potentially suitable saline aquifers exist at (i.e., below) and near the Indian River site.


To conduct its study, ARI collected all available existing data from deep oil and gas exploration and stratigraphic test wells drilled in Delaware, Maryland, New Jersey, and Virginia.

## 6.6 CO<sub>2</sub> Injection

### *Location of CO<sub>2</sub> Injection Wells for the Indian River IGCC Project*

For the 65% capture case, NRG anticipates drilling about four horizontal CO<sub>2</sub> injection wells, depending on reservoir characteristics. Each well will require approximately one acre of land to be cleared and fenced off. The short CO<sub>2</sub> pipeline will be run along existing NRG land to minimize the incremental impact on the environment and expedite permitting. Existing power line rights-of-way will be used to take the CO<sub>2</sub> from the plant to the vicinity of the injection.

A CO<sub>2</sub> booster compression station will be needed to reach injection pressures. This compressor will be designed to pressurize the CO<sub>2</sub> to approximately 1,000 psi before injecting it into the injection well.



There are many benefits to injecting close to Indian River. The shorter pipeline required reduces the risk of potential incidents involved in CO<sub>2</sub> transport, as well as capital and operating costs, and has regulatory support. Additionally, there are few shallow or deep well penetrations which could cause CO<sub>2</sub> leakage and the operations and management of injection can be easily synchronized with the Indian River IGCC Project.

### *NRG's CO<sub>2</sub> Injection Well Plan*

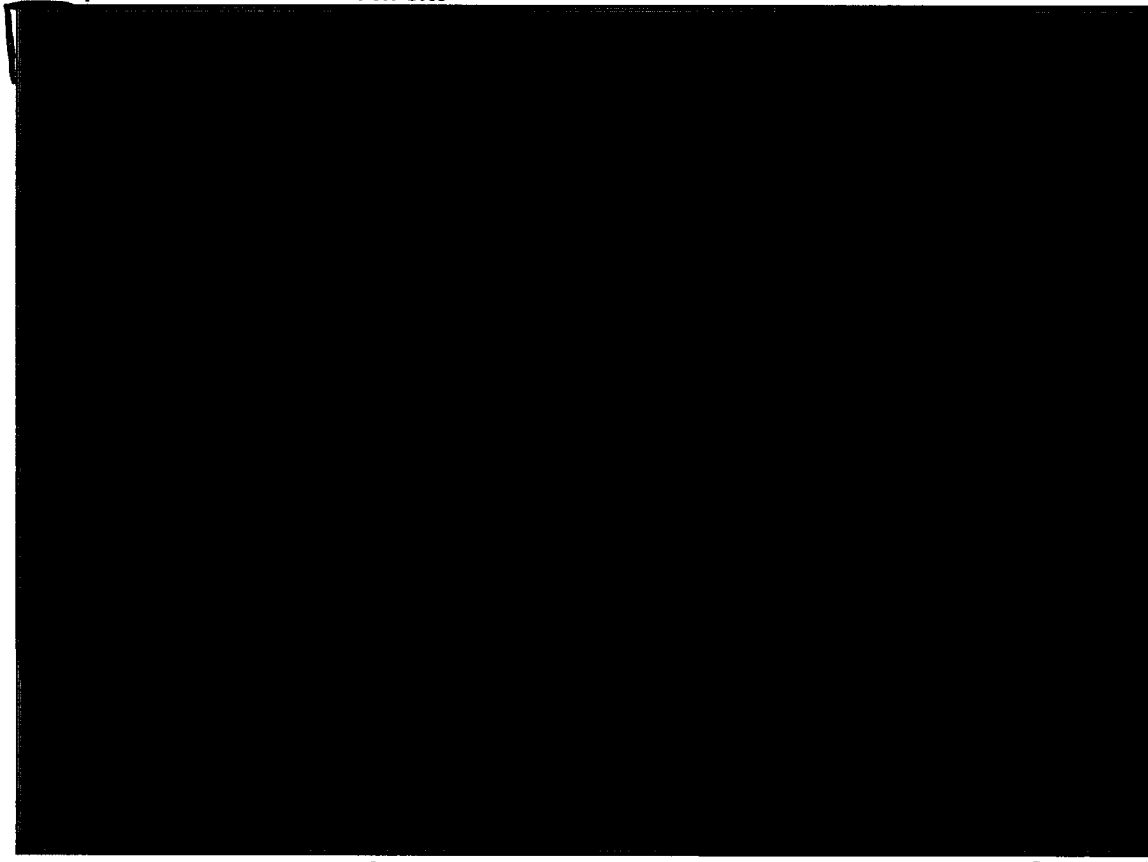
#### *Step 1: Detailed Geologic Evaluation*





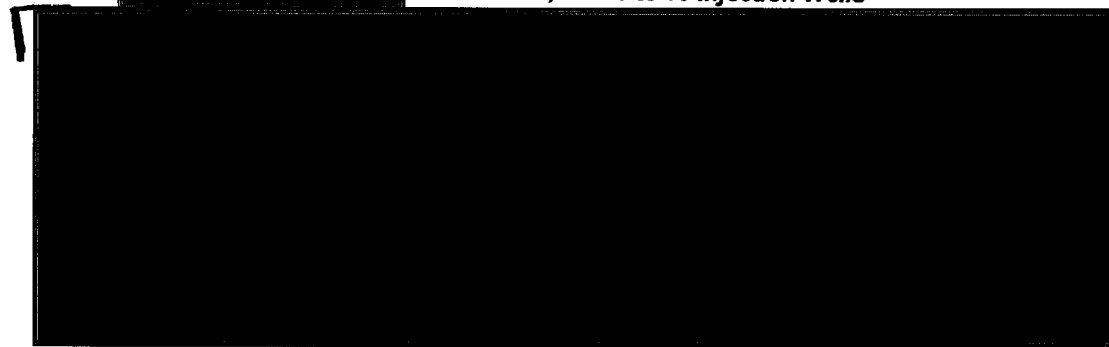


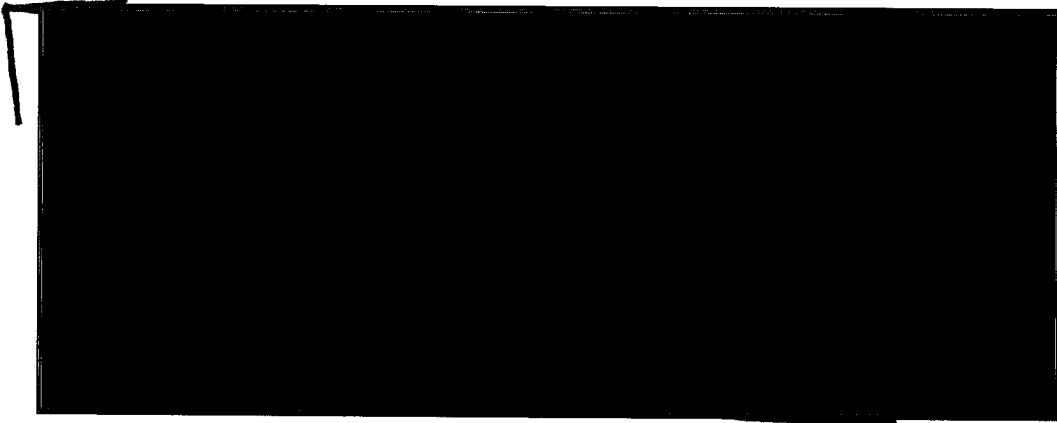
**Step 2: Test Coreholes at Each Site**



**Step 3:**

**Finalize Site; Drill 1 to 10 Injection Wells**





### **CO<sub>2</sub> Pipelines**

**Industry Experience.** The EOR industry has two decades of safe and cost-effective experience transporting CO<sub>2</sub> for various distances – from short haul to hundreds of miles. NRG will take advantage of the knowledge built up by the EOR industry in general and also through its collaboration with El Paso, pursuant to the Sequestration Effort.

The longest and most experienced CO<sub>2</sub> pipeline in operation is the Cortez pipeline. Originally built by Shell and currently operated by Kinder Morgan, the Cortez pipeline transports supercritical CO<sub>2</sub> produced at McElmo Dome, a natural CO<sub>2</sub> deposit in southwestern Colorado, to EOR projects in the Permian basin of Western Texas and Eastern New Mexico. The pipeline is 500 miles long, 30 inches in diameter, and cost approximately \$480 million to construct in 1984 (\$32,000 per inch-mile). It has a production capacity of nearly 60,000 ton/day (i.e., 1.1 Bcfd).

The Cortez pipeline is constructed of carbon steel with no internal protective coating, so the CO<sub>2</sub> must be thoroughly dehydrated prior to entry to the pipeline. It utilizes a double-seal design with oil between the seals to enhance seal life (two years). There are seven mainline stations along the pipeline to keep the CO<sub>2</sub> above its critical pressure of 1,100 psi but below the 2,145 psi pressure limit of the pipe. The wall thickness of the Cortez pipeline is telescoped from (0.688 to 1.000 inch) to handle pressure changes. The gathering system is monitored for line integrity, using vortex shedding meters, and for quality control. Pressure relief valves are installed on each incoming gathering line to avoid overpressuring of the gathering system and mainline. The remaining stations include three pump and three pressure-reducing stations. Meter runs equipped with orifice meters and densitometers are used to calculate throughput.

Given the highly corrosive environment of the McElmo Dome CO<sub>2</sub> field setting, and the potential hazards of leakage, Shell and Kinder Morgan have employed a variety of measures to assure environmental and health safety. Production at McElmo Dome comprises a combination of liquid CO<sub>2</sub>, water and a CO<sub>2</sub>/H<sub>2</sub>O vapor, produced at a temperature of approximately 13°C. Shell determined that the use of costly high-chromium steel components could be minimized by an effective dehydration system, which precludes the formation of free water and corrosion within the Cortez pipeline. At the compressors, the operator monitors visually and using ultrasonic thickness. The glycol contactor shells, which are carbon steel and include a 0.25-inch corrosion allowance, also are monitored.

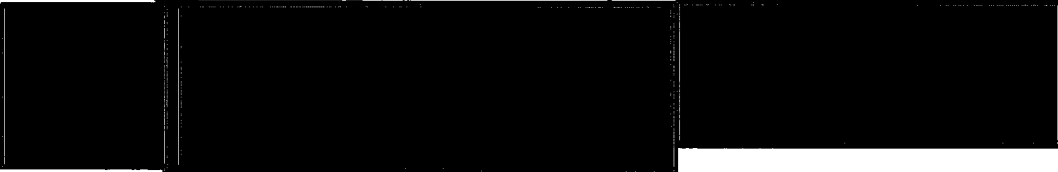
Corrosion control and safety technologies that are used at McElmo Dome and could be considered for any requisite Indian River CO<sub>2</sub> pipeline, including:

- Wedge-shaped up-dip pinch-out of the Waste Gate Formation has the potential to permanently trap injected CO<sub>2</sub>.

### ***Operational Impacts***

#### **Environmental Impacts from CO<sub>2</sub> Transport and Injection**

An important component of the overall CO<sub>2</sub> capture and sequestration for the Indian River IGCC Project will be planning to minimize any health, safety, and environmental impacts. Based on work performed to date, NRG expects any potential CO<sub>2</sub> leaks from the target formation to be negligible and that the stored CO<sub>2</sub> will have no significant impact on fresh water supplies, terrestrial ecosystems overlying the plume, or exert any material greenhouse gas effect in the



The following actions would be taken by NRG to minimize likelihood of a CO<sub>2</sub> leak:

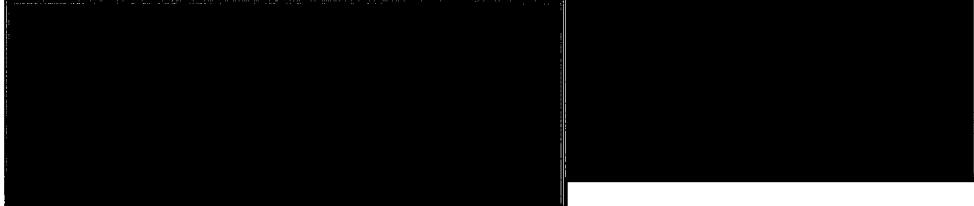
1. *Search for abandoned wells in the vicinity of the CO<sub>2</sub> plume, inspect and reseal as needed.*



2. *Thorough characterization of the cap rock and target formation.*



3. *Proper construction injection and observation wells.*



4. *Protect cap rock integrity.*



5. *CO<sub>2</sub> injection modeling and well placement.*



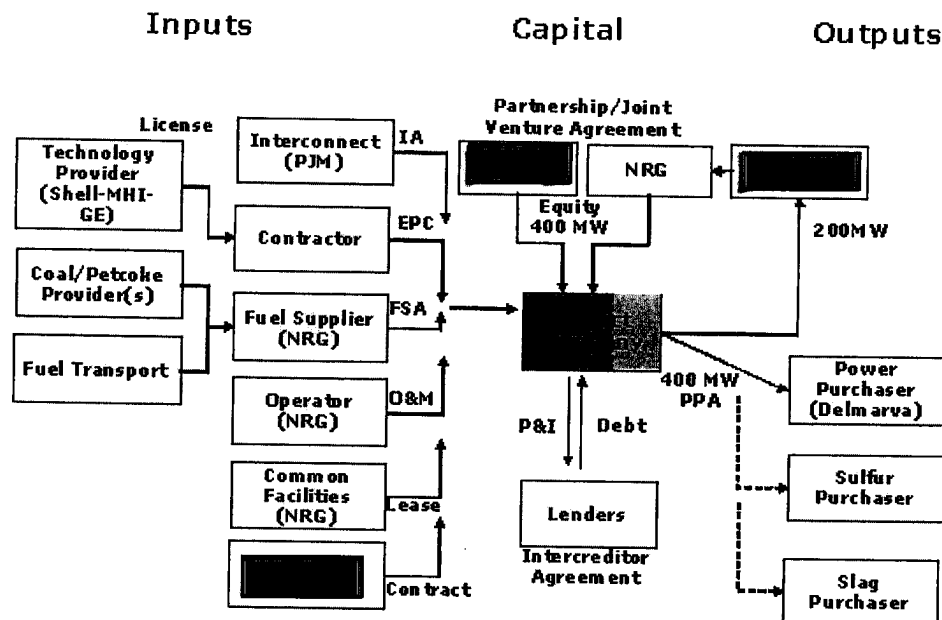
## 9 Financing

### 9.1 Ownership Structure

NRG plans to utilize a traditional non-recourse project financing structure during the construction and operating phases for the Indian River IGCC Project that are supported by the cash flows from the Power Purchase Agreement ("PPA").

Non-recourse financing structures are commonly used to fund the acquisition or construction of long-lived infrastructure assets, such as power plants, and are based upon a financial structure where project debt and equity used to finance the project are paid back from the cashflow generated by the project. The financing will be secured by the Indian River IGCC Project itself, including the PPA, and will utilize a special purpose entity. The anticipated project structure is shown in Figure 9-1.

Figure 9-1 Project Structure



### 9.2 Project Financing Plan

#### Debt and Equity Funding

Based on discussions with various commercial and investment banks, NRG anticipates that the Indian River IGCC Project will be funded with approximately 65% debt and 35% equity during the construction period, moving to a capitalization of approximately 70% debt and 30% equity for the term lending following the commercial operation date of the facility.

Although NRG is able to supply 100% of the required equity, it intends to join with equity partners, who, by virtue of their core businesses and expertise, are in a position to contribute additional value to the Indian River IGCC Project to assure its success. Even with third parties having equity in the Indian River IGCC Project, NRG plans to retain a material ownership interest in the project, reflecting its strong commitment to Delaware and IGCC technology. Sources of NRG's cash equity contribution will include NRG's current cash balance as well as future cash flows generated by its existing operations. NRG currently has unaudited liquidity of approximately \$2.5 billion including \$1.0 billion in cash, and expects to generate \$7.5 billion in additional cash flow from operations over the next six years.

To date, initial development and engineering activities for the Indian River IGCC Project have been funded by NRG corporate funds and no project debt has been used or assumed. NRG clearly understands the magnitude of financing required for this undertaking and has the financial resources, credibility with the financial markets (as evidenced by NRG's multiple multi-billion dollar debt financings executed during 2006), and in-house expertise available to implement this plan and complete the Indian River IGCC Project on budget and on schedule. Attached are examples of the over \$10 billion in financings that NRG has successfully completed over the last two years:

- December 2004: Senior Debt Refinancing, involving over \$800 million of term loans and \$420 million of preferred stock;
- August 2005: \$250 million of preferred stock;
- January 2006: Financing for Texas Genco acquisition, involving \$5.5 billion of senior loan facilities, \$3.6 billion of unsecured debt and \$500 million of convertible preference shares;
- August – October 2006: \$334 million of non-recourse debt utilized in a leveraged stock buy-back structure; and
- November 2006 Financing for Hedge Reset transactions, involving \$1.1 billion of unsecured bonds and \$500 million synthetic letter of credit facilities.

These significant transactions highlight NRG's ability to successfully access the capital markets, while at the same time retaining a capital structure for NRG overall of around 55% debt – conservative in its industry.

Debt financing for the Indian River IGCC Project will include several tranches of debt with various terms and maturities syndicated among a broad range of domestic and international banks and financial institutions. NRG has already canvassed the lending markets to determine which institutions would be receptive to participating in such a loan facility including marquee institutions [REDACTED]. Each has expressed its interest in serving in a lead role in a project finance syndication for the Indian River IGCC Project. NRG has also discussed with potential lenders the financial model for the Indian River IGCC Project and the key assumptions and conditions under which the planned project financing could take place. In parallel with negotiation of a financeable PPA for the Indian River IGCC Project, NRG will seek formal proposals from the lending community for a project finance package.

To provide evidence that the market conditions assumed by NRG for the Indian River IGCC Project are consistent with those required by commercial lenders, NRG has included a letter from [REDACTED] (see Figure 9-2) and [REDACTED] (see Figure 9-3 confirming their views that the Indian River IGCC Project is suitable for non-recourse project financing and their willingness to consider arranging this financing, [REDACTED]).

Figure 9-2 RBS Financeability Letter

December 15, 2006

NRG Energy, Inc.  
211 Carnegie Center  
Princeton, NJ 08540

RE: Delmarva Power's Request for Proposals (RFP) for New Generation Resources

Dear [REDACTED]

This letter is being written in support of the NRG Energy, Inc.'s ("NRG") response to Delmarva Power's ("Delmarva") request for proposal for the construction of new, cost-effective generation resources in Delaware to provide electricity to the utility's Standard Offer Service customers.

As you know, the [REDACTED] has been in discussion with NRG over the last year regarding its planned power project development initiatives identified in the Repowering America program. As the top global arranger of project finance loans, we believe there is significant appetite for financing many of these project initiatives, including your proposal to Delmarva.

Our discussions have focused particularly on the economic and environmental benefits of developing Integrated Coal Gasification Combined Cycle ("IGCC") power plants in the United States. As outlined below, [REDACTED] has significant experience in financing IGCC plants in Europe where the technology is recognized for its many economic and environmental benefits and has evolved from its early stages in the mid 1990's.

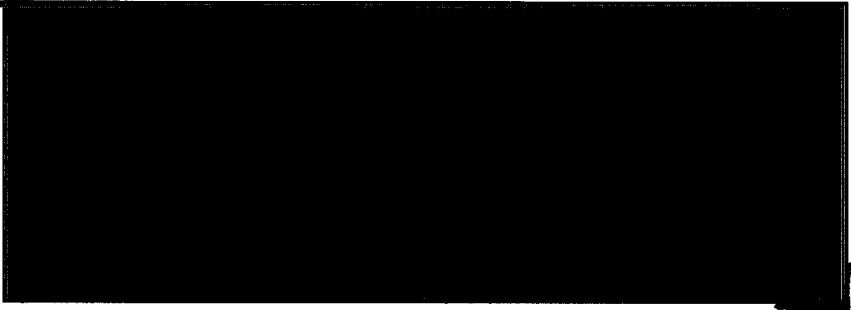

[REDACTED] has been recognized over that last two years as the global leader in project and structured finance. [REDACTED] is able to compliment this expertise with a suite of additional financial products, including derivatives, leverage finance and capital market products. With a particular focus on power, [REDACTED] in North America is currently active in the project finance market with several lead roles in financing traditional power plant technologies as well as renewable technologies.

[REDACTED] has also been involved in financing, in a lead role basis, all of the IGCC plants in the European project finance market since the mid-1990's, including projects in Spain, Italy and the Netherlands. We have experience with a variety of IGCC technology providers, including [REDACTED]. We have the added experience of working through early [REDACTED]

challenges to the technology and have successfully refinanced projects that have reached efficient, profitable and targeted performance standards. These performance standards are on par with the expected performance standards of a traditional combined cycle power plant.


We support NRG's efforts as a proven power project developer to finance, build, and operate IGCC plants in the US. We further support your proposal to use the Indian River Plant as an ideal application of IGCC technology to meet Delmarva's need for long-term, cost-effective power supply under a tightening environmental compliance regime.

We have reviewed your brownfield development plan to use the Indian River Plant as the IGCC plant. We agree that use of the existing site limits many of the challenges and costs associated with the greenfield development of an IGCC project. We have also reviewed the form of PPA provided by Delmarva that would constitute the off-take arrangement and obligations of the project. Undoubtedly, a contracted revenue source will be vital to any project financing of the plant and the proposed schedule appears to accommodate the construction of an IGCC plant.



While further refinements to a financing plan are expected as you proceed through the RFP process, we believe there is a strong market for the fundamentals of the plan and the application of this established technology in the US market. Some refinements would be required for the construction of an IGCC plant. Overall, however, we believe a financing plan could be achieved that allows for cost-effective long-term power supply with significant environmental benefits. While we remain open to pursuing multiple debt markets, we believe the appetite is particularly strong among project finance lenders who are more willing to assume construction risk.

Given our large presence in North America and our knowledge of IGCC financing from Europe, we believe that we are ideally suited to implement a financing plan for your proposal to Delmarva and will contribute to successful commercial deployment of IGCC. [REDACTED] would be pleased to act as a lead arranger for any forthcoming financing of your Delmarva proposal. Please note that this letter does not represent a commitment to finance your IGCC proposal, as any such commitment is subject to further due diligence and standard credit approvals. As



always, we are available for any questions on our capabilities described herein. We look forward to working with NRG to share our US capabilities and European successes and finalize an achievable financing plan for your proposal to Delmarva.

Sincerely;

[REDACTED]

Page 2 of 3

[REDACTED]



Figure 9-3 [REDACTED] Financibility Letter

[REDACTED]

[REDACTED]

[REDACTED]

Dear Caroline:

[REDACTED] is pleased to provide this letter in support of NRG's bid in response to Delmarva Power & Light's ("Delmarva") Request for Proposals for Generation Capacity and Power Purchase Agreement to supply 400 MW of baseload generation through the construction of a new 600 MW Integrated Gasification Combined Cycle ("IGCC") project at its existing Indian River generating plant site located at Millsboro, Delaware (the "Project"), under a 25-year power purchase agreement ("PPA"). We have been briefed on NRG's development and financing plans for the Project. Based upon our initial discussions and review, we are very supportive of NRG's efforts. If developed and capitalized generally as described to us, and outlined below, we believe that the Project would be suitable for non-recourse construction financing and subsequent term financing following commissioning.

We understand that NRG foresees a debt capital requirement of up to 70% relative to total Project costs. Given the power sale price and operating cost assumptions made by NRG, along with key investment considerations described below, we believe these debt levels will be attainable at a reasonable cost, and [REDACTED] would be willing to consider arranging such a financing.

This offering is one that we would seek to arrange given our abilities to place debt in any of the commercial bank, bond or institutional term loan markets. On the basis of our market-leading knowledge and experience arranging debt in each of these markets, we believe that there will be significant investor appetite for non-recourse construction and term financing of IGCC technology, subject to the investment considerations outlined below, among other usual and customary matters.

Our support of this transaction is a clear indication of [REDACTED] view of the Project's viability as well our view of the appetite in the financial markets for appropriately structured assets of this type. Key investment considerations will include:

- Existence of long-term contracts for the output of the Project with creditworthy counterparties, such as Delmarva, sufficient to permit significant amortization of the debt, with an acceptable debt service coverage ratio cushion, over the life of the offtake contracts;



- Acceptable leverage relative to the perceived credit risk of the Project over the life of the debt;
- Project construction undertaken through an appropriately structured fixed-price, turn-key, date-certain EPC contract with an experienced and creditworthy contractor;
- Significant equity commitment to the Project, invested at close of financing or invested over the construction period, with acceptable credit support.

We believe that the involvement of NRG as an equity investor is an important investment consideration for non-recourse lenders. The Sponsor has a track-record of successful development, construction, management and operation of technically complex projects in the power/energy sector, and we understand that NRG has made IGCC a key strategic business initiative.

As the market leader in non-recourse financing for the power sector, [REDACTED] is excited about the financing opportunity presented by the Project. We look forward to further opportunities to share our ideas with you about the financing of this important project.



We understand that you will place this letter in your bid package to Delmarva with respect to the proposed PPA. To that end, we have attached a few pages hereto detailing [REDACTED] position as the market leader in non-recourse project financing.

Please feel free to forward our contact information to the appropriate parties at Delmarva as a reference. [REDACTED] wishes you continued success in this application and your other endeavors.



**Proposed Project Loan Terms**

Table 9-1 summarizes the key financing terms which NRG believes, based on its consultations with leading financial institutions, could be available to the Indian River IGCC Project when financing negotiations commence in 2007, following execution of a long-term, financeable PPA.

**Table 9-1 Financing Terms**

	Construction and Letter of Credit; First Lien	Construction Second Lien	Take-Out Financing
Lenders	Commercial banks and financial institutions	Institutional investors	Institutional investors and/or bond market
Prevailing Interest Rate	[REDACTED]		
Loan Term	[REDACTED]		

These terms are generally consistent with those offered for non-recourse energy financings with one notable exception: the debt service coverage ratio is likely to be higher than for facilities which would utilize conventional technology. The requested coverage ratio is particularly important to banks during the critical startup period. A number of the first generation gasification and IGCC facilities a decade ago experienced difficulties during these periods and, even though the technology has advanced and more recent IGCC availabilities have been high, banks will likely look to diffuse technology risks in this way.

**9.3 Plan for Letters of Credit**

From execution of the PPA until financial close of the Indian River IGCC Project, collateral requirements pursuant to the PPA will be provided directly by NRG. NRG has ample liquidity and access to multiple letter of credit facilities, allowing it to issue up to \$1.8 billion in letters of credit through [REDACTED] of which approximately \$800 million currently remains available for new letters of credit. In addition, NRG currently has approximately \$1.0 billion in available cash.

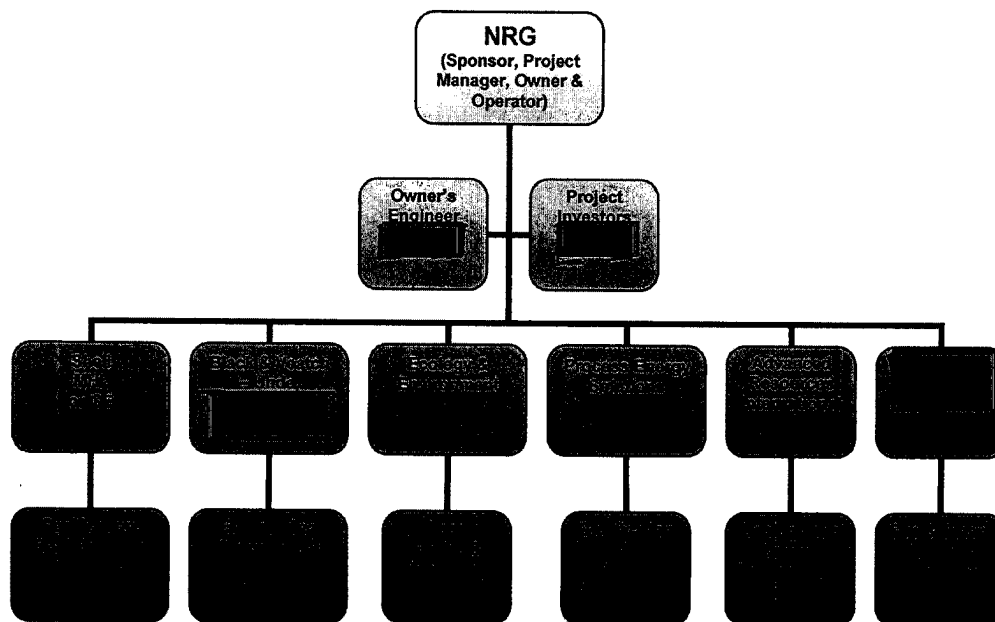
Upon financial closing of the Indian River IGCC Project, a letter of credit facility will be established at the project level with one or more commercial banks, most likely members of the primary lending syndicate to Indian River IGCC LLC. All participating banks will be required to meet the credit ratings requirements defined in the PPA.

**9.4 Evidence of Creditworthiness**

NRG owns over 24,500 MW of net generation assets worldwide, representing a diversified mix of generation technology, output configuration, and geographical location. This portfolio of assets generates significant cash flow, as indicated in NRG's financial statements and guidance.

NRG is a financially sound company with a total market capitalization of approximately \$7.0 billion and unaudited liquidity of approximately \$2.5 billion, including \$1.0 billion in cash. Over the next six years, NRG expects to generate approximately \$7.5 billion in additional cash flow from operations. NRG's growth over the past year has been noteworthy with its stock price change shown below on a percentage growth basis over the past 12 months.

Figure 10-1 Project Participants



#### 10.4 Black & Veatch

##### Overview

Black & Veatch Corporation is a leading global engineering, consulting and construction company. Founded in 1915, Black & Veatch specializes in infrastructure development in energy, water, telecommunications, management consulting and environmental markets. It offers leading experience in the market segments it serves. Black & Veatch is an employee-owned company with more than 90 offices worldwide. The firm is ranked on the Forbes "500 Largest Private Companies in the United States" listing.

Black & Veatch has been active in providing engineering services for the evaluation and development of gasification and IGCC technology since 1980. The firm's extensive engineering experience in designing, building, and managing large, complex projects qualifies it to use its considerable gasification, process, power, and materials handling knowledge to perform comprehensive services for gasification and IGCC power plants.

Black & Veatch has designed, performed feasibility studies, and performed independent project assessments for numerous gasification and IGCC projects using various gasification technologies. The company has also performed three major internal conceptual design and economic evaluations of IGCC projects that include comparisons with pulverized coal and fluidized bed plants. Black & Veatch engineered and constructed the Farmland Coke Gasification Plant. This experience allows Black & Veatch to provide consulting and engineering for conversion of low value fuels (refinery residue, pet coke, low-rank coals) for the generation of electricity and co-production of steam, chemicals, and synthetic fuels.

Black & Veatch's qualifications for IGCC projects include a strong experience base in heat transfer technologies. This expertise is part of Black & Veatch's extensive background in the engineering of both steam and combustion turbine power generation facilities and is important to the optimum use of chemical and thermal energy associated with gasification facilities. Black &

Figure 10-2 Uhde Letter of Interest

**Uhde**[REDACTED]  
December 4, 2006

Caroline Angoorly  
Vice President, Development & Counsel, NE  
NRG Energy, Inc.  
211 Carnegie Center  
Princeton, NJ 08540

Subject: NRG Indian River IGCC Project

Dear Ms. Angoorly

Uhde Corporation of America would like to confirm our interest in participating as a provider to your Coal Gasification Project to produce electricity and would like to further our mutual efforts to advance the development and implementation of the proposed project. Through our various discussions we have gained a greater insight to the project and remain positive regarding its successful development.

Uhde is principally prepared to support NRG for the Indian River Project in the implementation of the gasification technology.

Uhde, a leader in providing services for gasification applications, is active in the field of engineering, procurement and construction of gasification and related technologies. Uhde has extensive experience in the realization of gasification projects based on eight different gasification technologies. In particular Uhde has a strong relationship with Shell Gas & Power and Shell Global Solutions, being the technology providers of the Shell Gasification Process and the Shell Coal Gasification Process.

Shell draws upon over 100 years of experience to provide technical services to industry including its proprietary solids gasification technology. The team of Shell and Uhde is uniquely qualified to provide services for the engineering, procurement and construction of your project.

I look forward to further activities regarding this most interesting Project

Best regards,  
[REDACTED]

Uhde Corporation of America  
1320 Westington Pike, Bridgewater, PA 15017  
[REDACTED]

Figure 10-3 Shell Letter of Support

**Shell Gas & Power**

Shell US Gas & Power LLC  
777 Walker St., 22<sup>nd</sup> Fl.  
Houston, Texas 77002

December 5, 2006

Mr. Morten Sissner  
Director of Development  
NRG Energy, Inc.  
211 Carnegie Center  
Princeton, NJ 08540  
USA

Dear Mr. Sissner:

I refer to ongoing discussions between our respective companies concerning NRG's proposed Integrated Gasification Combined Cycle ("IGCC") project to be located at its Indian River Generating Station, in Millsboro, in Sussex County, Delaware (the "Indian River IGCC Project").

Shell welcomes the opportunity to continue to work constructively with NRG and its advisors and potential partners with respect to the Indian River IGCC Project. In particular, in the context of NRG's response to the Request for Proposal ("RFP") issued by the Delmarva Power & Light Company ("Delmarva") required under the Electric Utility Retail Customer Supply Act of 2006 (the "Act"), due on December 22, 2006, we would like to set forth our intention to offer a Shell Coal Gasification Process License to the Indian River IGCC Project.

Assuming that NRG (or its project subsidiary) is selected as a preferred bidder by Delmarva through the RFP process, Shell is prepared to offer NRG a Coal Gasification Process License, on terms acceptable to both parties, for the Indian River IGCC Project. As part of the offer of a license, Shell would, again on terms acceptable to both parties, provide through one of its affiliates, process design and inspection services to enable NRG's contractors to successfully complete construction and startup of the gasifier.

We look forward to continuing to work with you to bring IGCC to the State of Delaware, consistent with its energy and environmental policy objectives reflected in the Act, and want to thank you for having selected the Shell Coal Gasification Process.

Very truly yours,



Figure 10-4 Praxair Support Letter



Praxair, Inc.  
175 East Park Drive  
Towanda, NY 14150

December 14, 2006

Ms. Caroline Angoorly  
Vice President, Development and Counsel, Northeast  
NRG Energy, Inc.  
211 Carnegie Center  
Princeton, New Jersey 08540

Dear Ms. Angoorly:

I refer to the ongoing discussions between our respective companies concerning NRG's proposed Integrated Gasification Combined Cycle project to be located at its Indian River Generating Station, in Millsboro, in Sussex County, Delaware (the "Indian River IGCC Project").

Praxair, Inc. is very excited about the opportunity to supply oxygen, nitrogen, and compressed dry air to the Indian River IGCC Project through the design, construction, operation and ownership of the air separation units ("ASUs") for the project.

We are one of the world's largest industrial gas companies and the largest in North and South America. With 27,000 employees and operations in 40 countries, Praxair is focused on helping its customers by providing efficient and environmentally friendly solutions and services. Our primary products are atmospheric gases -- oxygen, nitrogen, argon and rare gases, specialty gases -- carbon dioxide, helium, hydrogen, and semiconductor process gases, and process technology and system integration. Over the near century of its existence, Praxair has remained a leader in the development of processes and technologies that have revolutionized the industrial gases industry.

Praxair has designed and built single ASU trains of 3,000 stpd of oxygen production and associated nitrogen and other co-products production. Praxair owns and operates 400+ cryogenic air separation plants worldwide. We also own and operate gasification plants for syngas and hydrogen production. Over the years we have supplied industrial gases/plants to seven different gasification projects, including IGCC, and are in the process of designing and building an ASU for another gasification project. We have participated in various IGCC optimization studies with other key technology suppliers. We continually focus on research and development of related gases production, gases application, and process integration technologies to bring value for IGCC, hydrogen, and CO2 recovery/purification applications. This is evidenced by our active patent portfolio of 3,000+ worldwide patents.

- 1 -



Praxair, Inc.  
175 East Park Drive  
Tonawanda, NY 14150

As the industrial gas supplier for the Indian River IGCC Project, Praxair will bring:

- Leadership in the marketplace of gasification and IGCC and in technology through innovation specific to IGCC, hydrogen and CO2
- Demonstrated capabilities to deliver required industrial gases from ASUs with best in class reliability and long term performance
- Leadership in the carbon dioxide capture know-how and future technology for its sequestration, consistent with reduction of greenhouse gases
- Support and experience in the optimization and development of front-end engineering and design
- Financial strength and a core competency of ASU design, build, own and operate driven by safety, reliability, performance and long term sustainability as key values

Projects like the Indian River IGCC Project that produce power and hydrogen from coal show environmental leadership which aligns well with Praxair's goals. Based upon our knowledge of the Indian River IGCC Project, Praxair is pleased to be considered as the industrial gas provider for the project and is interested in making the project a reality. Attached is a term sheet including the terms and conditions for a long term supply agreement to provide oxygen, nitrogen and compressed air to the project and design, build and operate the ASUs for the project.

We are very interested and committed to delivering the effort and results to make the Indian River IGCC Project a success. Thank you for considering Praxair for this opportunity.

Sincerely,

Attachment

  
PraxairTermSheet,  
NRG DE IGCC Proj.pdf



Figure 10-5 Air Products Support Letter



Air Products and Chemicals, Inc.  
7201 Hamilton Boulevard  
Allentown, PA 18195-1501

Caroline Angoorly  
VP, Development & Counsel, NE  
NRG Energy, Inc.  
211 Carnegie Center  
Princeton, New Jersey 08540

December 8, 2006

Re: ASUs for NRG's Indian River IGCC Project

Dear Caroline,

As we have discussed, Air Products and Chemicals, Inc. is very interested in working with NRG to help develop your Repowering America Program, including your proposed Integrated Gasification Combined Cycle project to be located at the Indian River Generating Station, in Millsboro, in Sussex County, Delaware (the "Indian River IGCC Project"). With our experience in the design, manufacture, installation and operation of very large air separation units ("ASUs"), Air Products is in a unique position to provide oxygen, nitrogen and related products to NRG's IGCC projects on an over the fence supply basis.

Air Products is one of the world's largest industrial gas producers, supplying a broad range of industrial gases: chiefly oxygen, nitrogen, argon, hydrogen and helium and related equipment for their production, distribution and use. We serve customers in industrial, energy, technology and healthcare markets worldwide with a unique portfolio of atmospheric gases, process and specialty gases, performance materials, and equipment and services. Founded in 1940, Air Products has built leading positions in key growth markets such as semiconductor materials, refinery hydrogen, home healthcare services, natural gas liquefaction, and advanced coatings and adhesives. The company is recognized for its innovative culture, operational excellence and commitment to safety and the environment. Air Products has annual revenues of \$9 billion, operations in over 30 countries, and over 20,000 employees around the globe.

We have an impressive and proven record in designing, constructing, and operating ASUs to supply oxygen for major oil and coal gasification, chemical and other projects worldwide. With more than 30 years experience in supplying oxygen for gasification applications, we are able to create specifications for the design, procurement of equipment, and operation of reliable ASUs for the Indian River IGCC Project.

Air Products has supplied dedicated ASUs and oxygen pipeline supplies for various integrated gasification combined cycle facilities including the following:

On-stream	Location	O <sub>2</sub> , MT/D	O <sub>2</sub> , bar(g)	Trains	Feedstock	End Use
1997	Netherlands	3,175	76	1	Resid	H <sub>2</sub> /Power
1996	Polk County, FL	1,840	40	1	Coal	IGCC
1994	Netherlands	1,780	33	1	Coal	IGCC
1987	Plaquemine, LA	1,360	45	1	Coal	IGCC

-2-

The Netherlands plant was the world's first fully integrated air separation facility. Designing the Netherlands ASU to meet the demanding requirements of a highly integrated application has uniquely prepared Air Products to provide equipment and services to serve the needs of any project, including the Indian River IGCC Project.

In addition to our experience at Louisiana, Florida, Netherlands and other projects, Air Products has participated in many design and study efforts worldwide to advance gasification combined cycle facility design. In performing IGCC studies, Air Products has worked with all the major combustion turbine suppliers and most of the leading engineering contractors in this industry.

In selecting Air Products as the ASU provider for the Indian River IGCC Project, this extensive experience will be available to support the successful completion and operation of the ASUs for the project.

Based upon our discussions and our review of your plans for the Indian River IGCC Project, Air Products strongly supports the project and believes the Indian River IGCC Project will provide an economic and environmental benefit to the residents of the State of Delaware. In support of your upcoming proposal to Delmarva Power for the Indian River IGCC Project, I am pleased to submit the attached Term Sheet.

We look forward to working with NRG on the Indian River IGCC Project as well as other projects in the future.

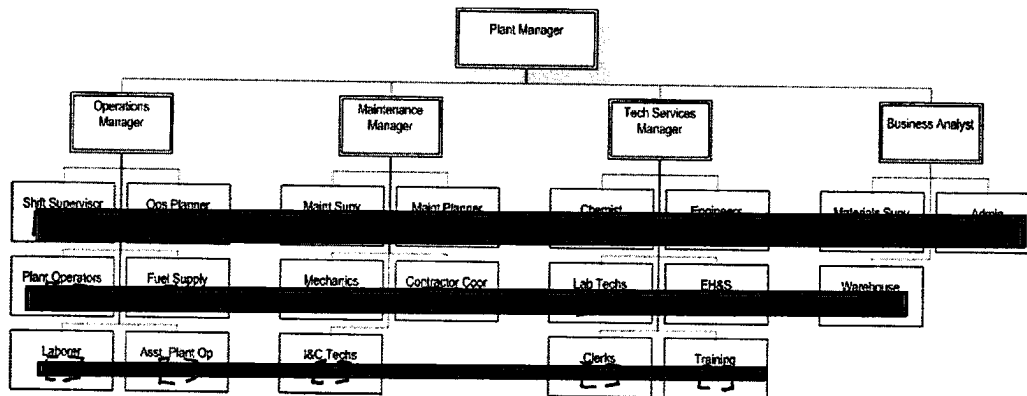
Sincerely,

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Plant staffing plans for the Indian River IGCC Project have been developed with key skills identified. The plant will require about 100 operations personnel, from the position of Plant Manager to Plant Operators and I&C Technicians. To the greatest possible extent, operations staff for the Indian River IGCC Project will be sourced from the local area. Figure 11-1 shows the organization chart of the proposed plant staffing.

Figure 11-1 Plant Staffing

## Indian River IGCC



## 11.2 Pre-Commercial Training

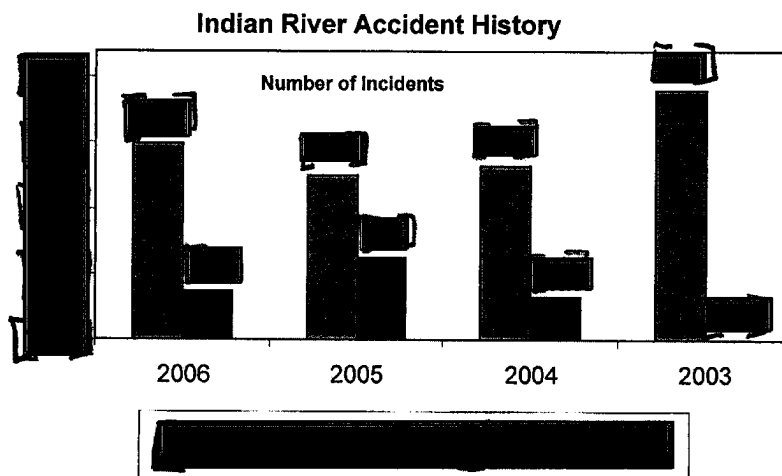
An extensive training program for all levels of the operations personnel will be implemented under the guidance of the gasifier technology provider. The operational characteristics of an IGCC facility require a mixture of qualified operators for the gasification block including gas clean up, as well as power plant operators for the power block. The Balance of Plant and Utilities sections of the plant will be very similar to a typical power plant.

The training program will consist of the following:

- *Classroom Technology Training* – A series of classes will be organized covering fundamentals of the IGCC technology and its operational requirements. Comparisons will be discussed with existing power plants and refinery/chemical operations. One of the key focus areas will be operational safety and safety systems.
- *Computerized Simulator Training* – The computerized simulator mimics the actual control consoles for an IGCC plant, allowing for thorough training through the simulation of a wide range of operational situations. This has proven to be a very effective part of the training program for operators at the other IGCC facilities worldwide and NRG will seek to capitalize on this training practice for the Indian River IGCC Project.

- Defining the overall safety program in terms of goals, objectives, elements and specific activities to be completed;
- Assigning specific safety responsibilities to employees, line supervisors and managers of facilities and in the corporate offices;
- Scheduling safety activities to ensure that each safety program activity is completed in a timely manner consistent with optimum accident prevention practice;
- Reporting safety activities weekly to provide the impetus for, and to ensure that all safety activities are appropriately completed; and
- Evaluating individual safety performance quarterly. We conduct quantified safety performance reviews, based on actions to prevent accidents, not the number of accidents that occurred. Our program is designed to define safety expectations, carefully evaluate performance in a meaningful way, provide feedback and recognize and reward individual performance and contributions.

**Figure 11-2 Safety Statistics for the Indian River Facility**



### ***NRG's Program Today***

Today, NRG implements a standard safety program in each facility we operate. This includes:

- A basic safety reference library is provided as a source of safety knowledge for all facilities.
- All accidents and near misses are investigated, and information is communicated to all NRG locations to prevent similar events. Reports on these incidents serve as an important safety awareness tool.
- Plant employees are required to conduct at least one job safety analysis per month. All supervisors are required to conduct at least one formal safety contact with each employee each month.
- Supervisors and managers must complete at least one formal safety observation each week, and safety awareness videos are shown to employees on weeks with



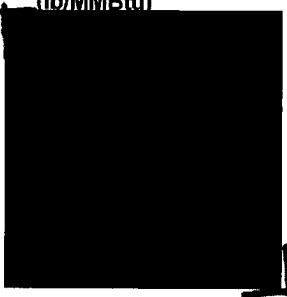
Table 11-2 Indian River Recordable & Lost Work Day Accident History – 2005-2006

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**Form H - Environmental Impact - Air Emissions**

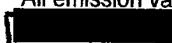
Please provide the following emission rate information for proposed generator(s), including supplemental capacity (duct-firing, steam injection, etc.), if applicable.

**Emission Rates on Primary Fuel**

	<b>Base Capacity (lb/MMBtu)</b>	<b>Full Load w/ Supplemental Capacity (lb/MMBtu)</b>
Oxides of Sulfur		All To Be Determined
Oxides of Nitrogen		
Carbon Dioxide		
Carbon Monoxide		
Volatile Organic Compounds		
Particulate Matter - PM10		
Particulate Matter - PM2.5		
Lead		
Mercury		

All emission values are permit estimates.

Maximum NOx emission rate (in parts per million):




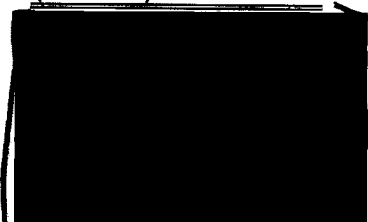

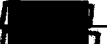
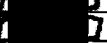

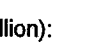
Maximum CO emission rate (in parts per million):



Maximum permitted/permittable annual capacity factor (%):



**Emission Rates on Secondary Fuel (if applicable)**

	<b>Base Capacity (lb/MMBtu)</b>	<b>Full Load w/ Supplemental Capacity (lb/MMBtu)</b>
Oxides of Sulfur		
Oxides of Nitrogen		
Mercury	NA	
Carbon Dioxide		
Carbon Monoxide		
Volatile Organic Compounds		
Particulate Matter		

Maximum NOx emission rate (in parts per million):



Maximum CO emission rate (in parts per million):



Maximum permitted/permittable annual capacity factor (%):



**Indicate if Facility is capable of CO2 capture. If yes, describe the potential methods for capture and associated costs.**

The facility is designed for 65% carbon capture. The carbon capture and sequestration option is discussed in Section 6 (Carbon Capture and Sequestration)

NRG/MTH&M Comments 12.17.06

DELMARVA POWER & LIGHT COMPANY  
2006 RFP

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[STANDARD FORM OF]  
POWER PURCHASE AGREEMENT

between

DELMARVA POWER & LIGHT COMPANY

("Buyer")

and

[\_\_\_\_\_]

Indian River IGCC LLC

("Seller")

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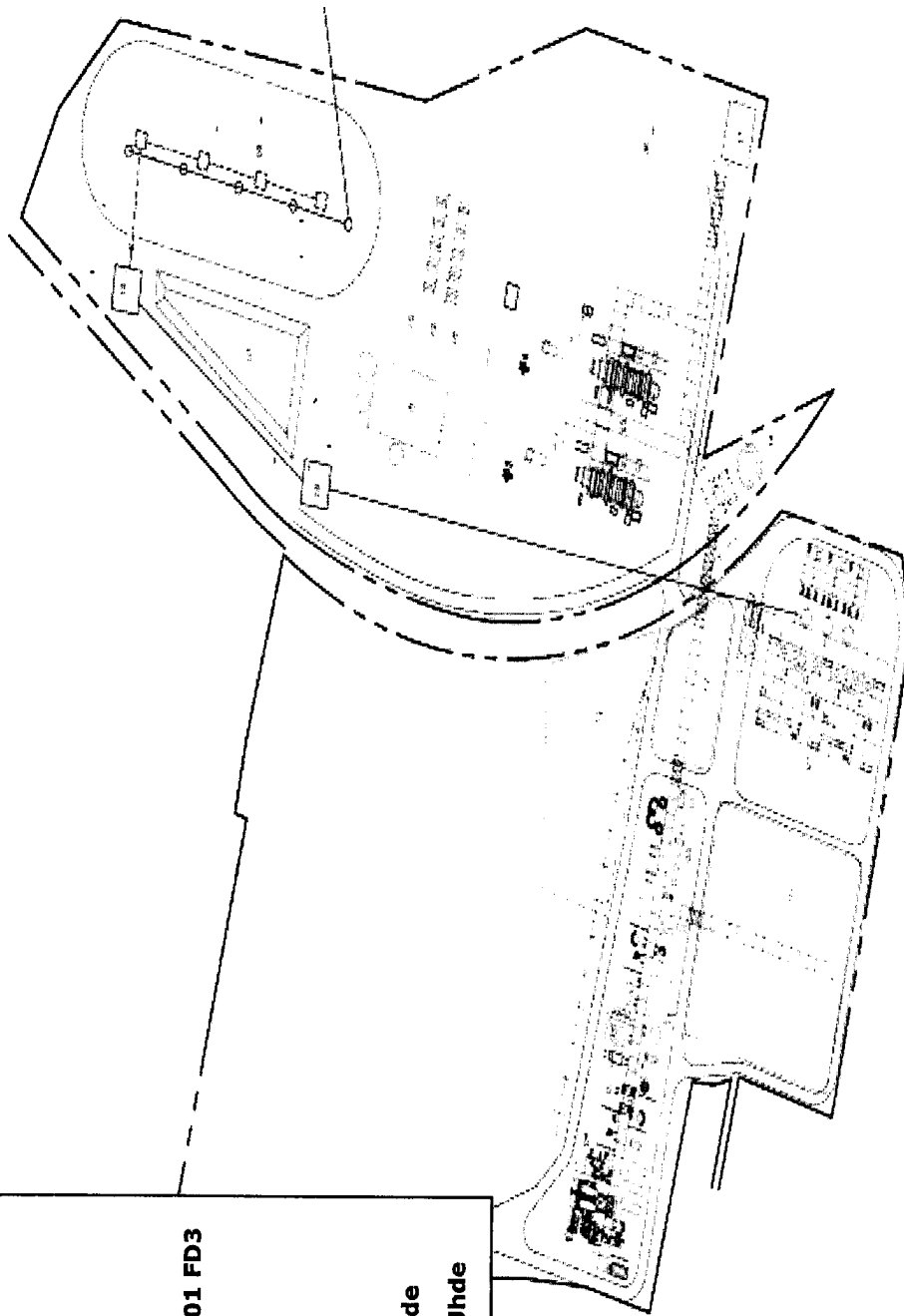
[Date]

Confidential/Privileged Information

# Repowering

## NE Repowering Plan – IGCC – Montville – CT

<b>MW:</b>	
- IGCC	630
- Retirements	
<b>Net</b>	
<b>Cost: - \$ million</b>	
<b>Technology:</b>	
- Gasifier:	Shell
- Turbines:	GE 7FB, Siemens 501 FD3 MHI 501F
<b>Fuel:</b>	
	Coal (75-80%)
	Petcoke (15-20%)
	Biomass (≤ 5%)
<b>EPC - Primary:</b>	Black & Veatch/Uhde
- Back-up:	SNC Lavalin/GDS/Uhde



\* Project financing estimated at 65%;  
expect third party equity participation



2006 Gasification Technologies Conference

CLEAR DIRECTION



# repowering

## NE Repowering Plan – IGCC – Huntley – NY

### MWs:

- IGCC

630

Cost - \$ million

### Technology:

- Gasifier

Shell

- Turbines

GE 7FBs, Siemens

501 FD3, MHI 501 F

Fuel :

Coal (75-80%)

Petcoke (15-20%)

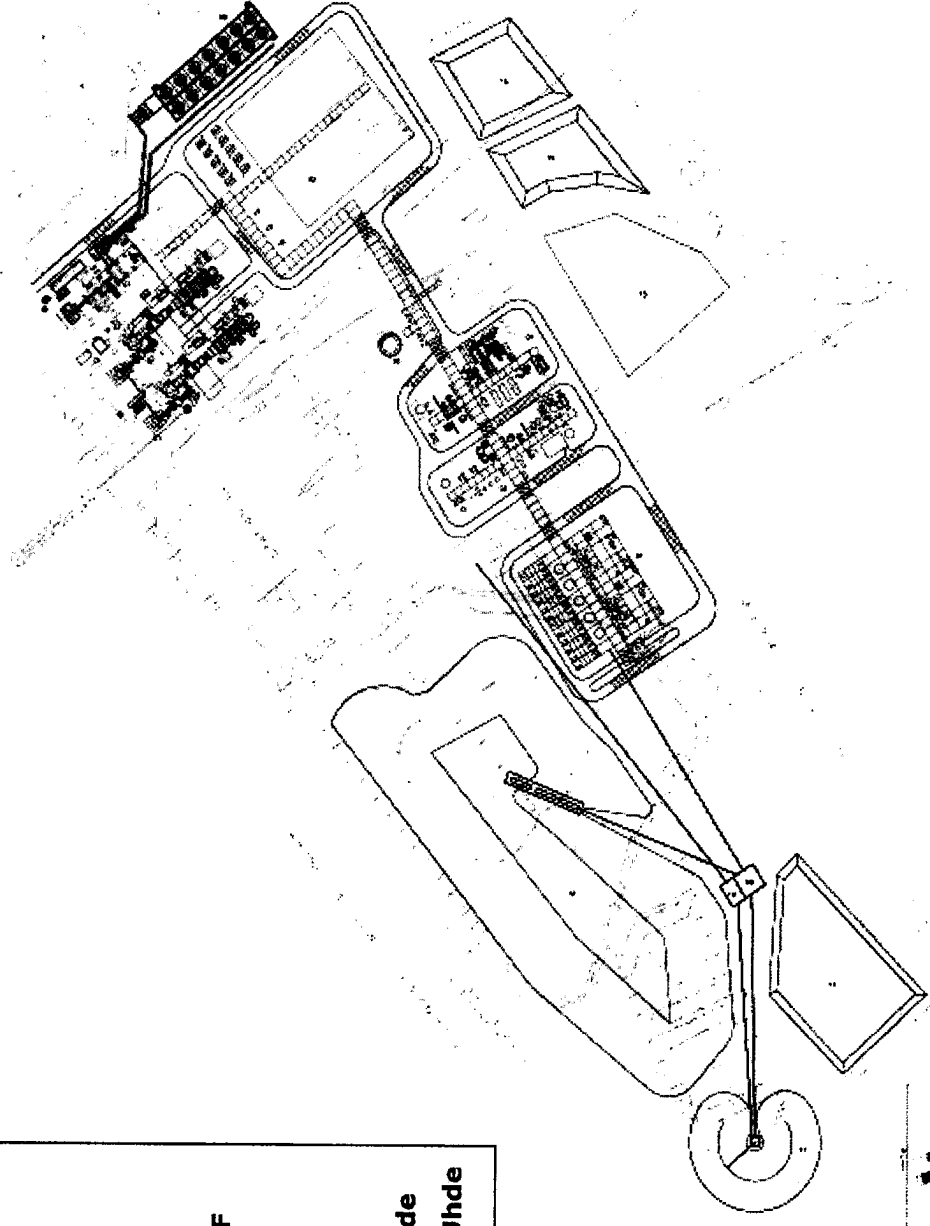
Biomass ( $\leq$  5%)

EPC - Primary

Black & Veatch/Uhde

- Back-up

SNC Lavalin/GDS/Uhde



\* Project financing estimated at 65%; expect third party equity participation

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Slide Redacted

Shell Presentation Slides Redacted In Their Entirety